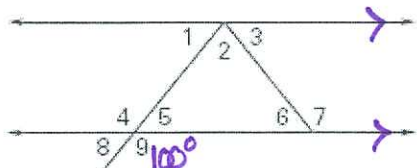


Name: _____ TP: _____

Form A HW#17: Transversal Application
Due Date: Wednesday, Oct. 2nd

1. In the figure below, lines a and b are parallel, and $m\angle 9 = 100^\circ$. Find $m\angle 1$.



TWO STEPS!

① Find $\angle 5$.

Rel. b/w $\angle 5$ & $\angle 9 =$ _____ ()

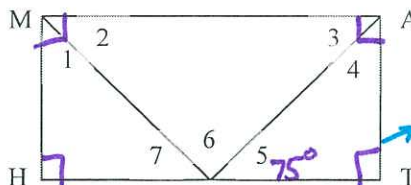
$\angle 5 =$ _____

② Rel. b/w $\angle 5$ & $\angle 1 =$ _____ ,

which is CONGRUENT!

$\angle 1 =$ _____

2. In the figure below, segments MA and HT are parallel. $\angle HMA$, $\angle MAT$, $\angle ATH$, and $\angle THM$ are all right angles. If $m\angle 5 = 75^\circ$ and what is the $m\angle 4$?



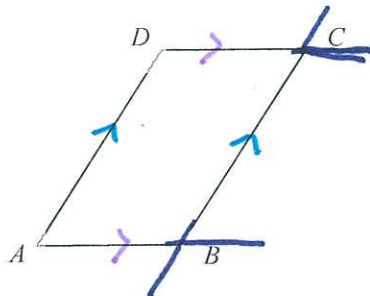
Label how many degrees!

① A triangle sums to _____ degrees

② Set up an equation!

3. In the figure below, $AD \parallel BC$ and $DC \parallel AB$. If $m\angle B$ is 30° , what is $m\angle C$?

- a. 30°
- b. 60°
- c. 150°
- d. Cannot be determined



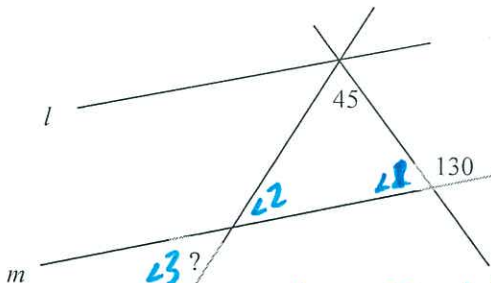
Label in diagram.

① Extend lines!
② What angle relationship is this?

③ Solve!

Justify your response:

4. In the figure below, lines l and m are parallel. Find the indicated angle.



① What is the relationship b/w 130° & $\angle 1$:

$\angle 1 =$ _____

② What is the relationship b/w $\angle 1$, 45° , & $\angle 2$? (What shape?)
which = _____

$\angle 2 =$ _____

③ What is the relationship b/w $\angle 2$ & $\angle 3$? $\angle 3 =$ _____

a. $m\angle 5 = m\angle 2$

b. $m\angle 6 = m\angle 4$

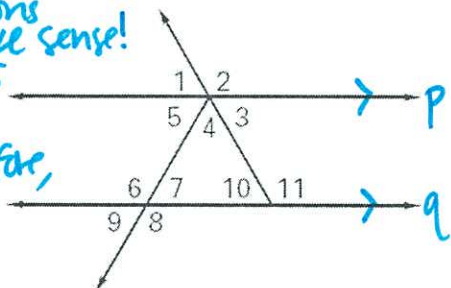
c. $m\angle 5 + m\angle 7 = 180^\circ$

d. $m\angle 5 + m\angle 6 = 180^\circ$

e. None of the above

Justify your response:

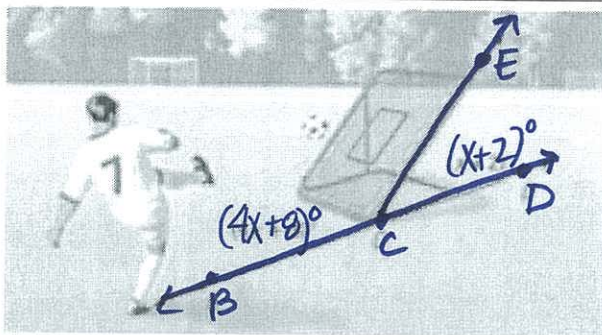
5. In the figure below, lines p and q are parallel. Which of the following options to the right must be true?



Cross out options that DON'T make sense!
For example, $\angle 5$ is acute & $\angle 2$ is obtuse. Therefore, they CAN'T be equal!

Justify your response:

SPORTS When viewed from the side, the frame of a ball-return net forms a pair of supplementary angles with the ground. Find $m\angle BCE$ and $m\angle ECD$.



7. **Solution**

The angle to the left says $(4x + 8)$ degrees. The angle to the right says $(x + 2)$ degrees.

GOAL 1:

GOAL 2:

REQUIRED (List the measure of each angle)

ANALYSIS (How will you set up an equation to represent the angles above? What is the relationship?) **WRITE IN COMPLETE SENTENCES.**

SOLVE Set up your equation & solve!

PARAPHRASE (back in!) **PROVE** how you know this is right! (Plug your values